

# COUNTRY ANALYSIS BRIEFS

## Caribbean

Last Updated: November 2009

### Background

**Most Caribbean islands are net energy importers.**

The islands of the Caribbean basin are predominantly net energy importers, with the exception of Trinidad and Tobago. Some islands, such as Aruba, Curacao, and the U.S. Virgin Islands, are important centers for oil refining and storage, due to their proximity to the U.S. market. In recent years, there has been concern that higher global oil prices will impair the Caribbean economies, as they are highly dependent upon oil for the energy needs. In response, the island nations have been discussing ways to promote alternative energy sources and better integrate their energy sectors.

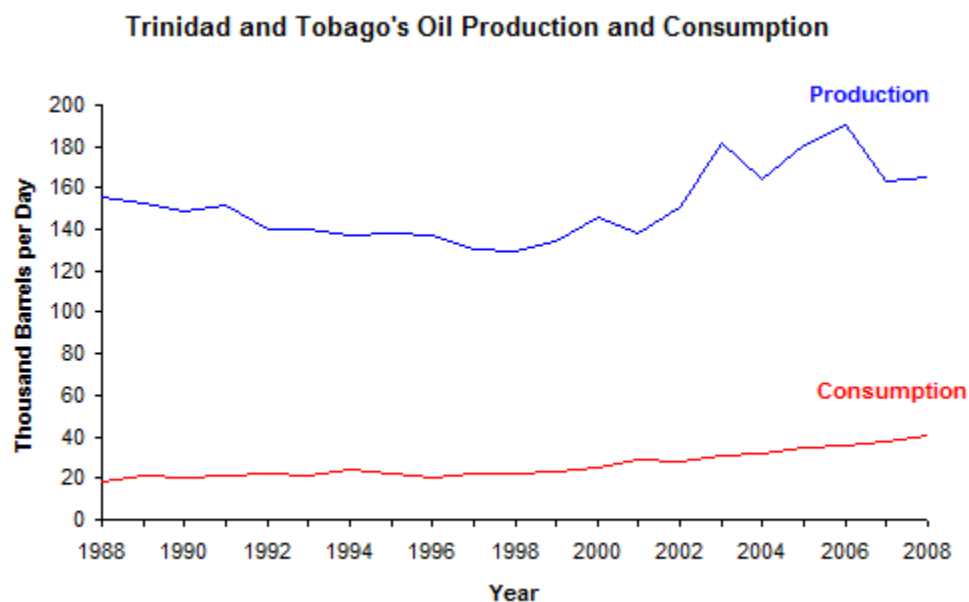


### Oil Production

#### Trinidad and Tobago

**Trinidad and Tobago is the largest oil producer in the Caribbean.**

Trinidad and Tobago contains the majority of the Caribbean's oil production. In 2008, the country produced 165,420 barrels per day (bbl/d) of total oil production, of which 114,280 bbl/d was crude oil, the remainder mostly consisting of natural gas liquids (NGLs). In 2008, Trinidad and Tobago consumed an estimated 41,000 bbl/d of oil, allowing it to export a sizable amount of its production. The largest oil producer in the country is the state-owned Petroleum Company of Trinidad and Tobago (Petrotrin). Other large producers include BP Trinidad and Tobago and BHP Billiton.



Source: EIA Country Energy Profiles

### Cuba

Cuba produced 52,600 bbl/d of oil in 2008, roughly the same as 2007. In 2008, the country consumed an estimated 176,000 bbl/d, making the island a net oil importer. Cuba's oil production has increased significantly in the past two decades, with the country only producing 13,000 bbl/d in 1988. Most of Cuba's oil production occurs in the northern Matanzas province, producing a heavy, sour crude that requires specific processing. Much of this production occurs onshore, though there is some offshore production in shallow coastal waters. Cuba's oil production seems to have largely stabilized in the near term, with any additional increases in production dependent upon the discovery of substantial new reserves (see below). In 2009, state-owned Cupet cancelled its production sharing agreements with Canadian firms Sheritt and Pebercan for the Block 7 area, which represents about two-fifths of the country's total oil production.

### Offshore Exploration

There has been considerable interest in exploration activities in Cuba's offshore basins, especially in the Gulf of Mexico. The U.S. Geological Survey (USGS) mean estimate for undiscovered oil reserves in the North Cuba Basin (the basin north and west of the island in the Gulf of Mexico) is 4.6 billion barrels. Cupet estimates that all of Cuba's offshore basins could contain in excess of 20 billion barrels of undiscovered oil reserves. However, actual exploratory drilling in the area has been, to date, quite limited. In July 2004, Repsol-YPF announced that its exploratory well in Block N27 in the Gulf of Mexico had discovered high-quality crude oil, but not in commercially-viable quantities.

In 2007, Cupet and Venezuela's PdVSA concluded an agreement to jointly explore Cuba's offshore areas. A consortium of Repsol-YPF (40 percent and operator), Norsk Hydro (30 percent) and ONGC-Videsh (30 percent) announced that it would drill an offshore exploratory well in 2010-2011. The consortium has exploratory licenses in seven blocks in the Gulf of Mexico. According to media reports, Cuba also signed offshore exploration agreements with Russia's Zarubzhneft in 2009. Petobras announced in July 2009 that it had completed seismic work at its offshore block (Block 37) in the country. As of late 2009, no Chinese oil companies were drilling in Cuba's offshore basins, according to media reports.

### Barbados

While Barbados does not have significant crude oil reserves, it does maintain a small amount of domestic production. Oil production in Barbados during 2008 averaged 1,100 bbl/d, while the country consumed an estimated 9,000 bbl/d. As Barbados has no refining capacity, its oil is mostly sent to Trinidad and Tobago for processing, with the refined products returned for domestic consumption.

## Oil Refining

***The Caribbean has several export-oriented oil refineries, focused towards the U.S. market.***

According to *OGJ*, the Caribbean region has a combined 1.8 million bbl/d of nominal nameplate refining capacity. Smaller refineries mostly produce petroleum products for local demand, whereas the larger facilities are geared towards exports to the United States and other markets. The Caribbean is also an important storage location for crude oil brought in from outside the region.

The largest refinery in the Caribbean is the Hovensa facility in the U.S. Virgin Islands, with crude distillation capacity of 495,000 bbl/d. Hovensa, a joint venture of PdVSA and Amerada Hess, sends most of its refined product output to the United States: in 2008, the U.S. Virgin Islands sent 320,000 bbl/d of refined products to the United States (see the [EIA Petroleum Navigator](#) for more details). Other large facilities in the region include the 320,000-bbl/d Isla refinery in the Netherlands Antilles, operated by PdVSA; the 230,000-bbl/d San Nicolas in Aruba, operated by Valero (according to company statements in October 2009, this refinery was shut down in the third quarter of 2009 due to falling discounts for heavy sour crude varieties); and the 165,000-bbl/d Pointe-a-Pierre in Trinidad and Tobago, operated by Petrotrin. Both the Hovensa and Isla refineries source the bulk of their crude oil supplies from Venezuela.

In December 2007, Cupet and PdVSA completed the re-building of the Cienfuegos refinery, which had been started during the Soviet era but never completed. The project also reportedly improved the refinery's ability to handle heavier crudes and produce more light products. The facility has a distillation capacity of 65,000 bbl/d, with announced plans to increase that to 100,000 bbl/d at a later date. Cuba has three additional refineries: Havana (34,000 bbl/d), Santiago (22,000 bbl/d), and Cabaiguan (5,000 bbl/d).

According to media reports, a proposed \$2 billion refinery near St. Elizabeth, Jamaica has entered advanced planning stages. Project sponsor Petroleum Corporation of Jamaica (PCJ) has stated that the facility will have an initial crude refining capacity of 250,000 bbl/d. PCJ has also reached an agreement with PdVSA for a \$300 million revamp of its Kingston refinery that would increase distillation capacity by 15,000 bbl/d, add a coke-fired co-generation plant, and improve the quality of refined products produced there.

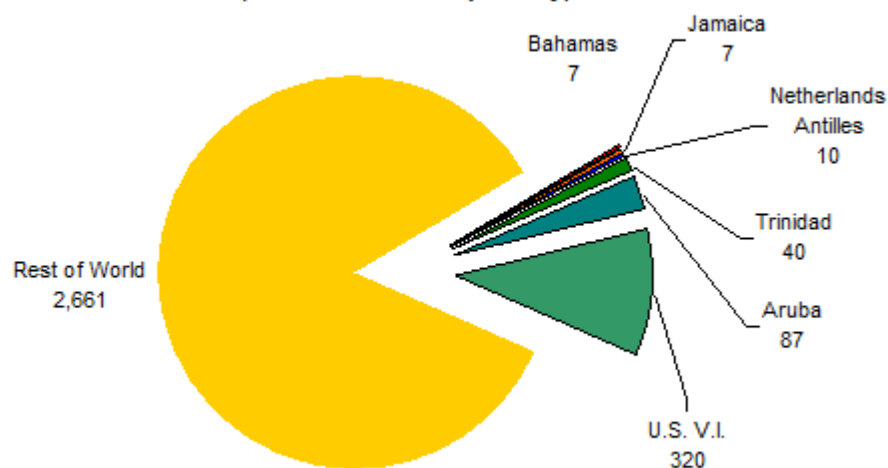
### **Regional Initiatives**

Many of the Caribbean countries import oil from Mexico and Venezuela under favorable terms. Under the San Jose Pact, Barbados, the Dominican Republic, Haiti, and Jamaica receive oil and refined products from those two countries. Cuba also receives crude oil and petroleum products from Venezuela at a discounted rate. In 2005, nearly all Caribbean countries signed the Venezuela-backed Petrocaribe initiative. Under the program, Venezuela sells crude oil and refined products to these countries under favorable financing terms.

### **Exports to U.S.**

In 2008, the United States imported 471,000 bbl/d of petroleum products from the Caribbean, 54,000 bbl/d lower than 2007. The reduction in imports from the region was largely the result of lower imports from Aruba and the U.S. Virgin Islands, which fell by 23,000 bbl/d and 26,000 bbl/d, respectively. The U.S. Virgin Islands represented the bulk of the region's exports to the United States (320,000 bbl/d), followed by Aruba (87,000 bbl/d) and Trinidad and Tobago (40,000 bbl/d). Imports of refined production from the Caribbean represented 15 percent of total U.S. refined product imports in 2008.

**U.S. Imports of Refined Petroleum Products, 2008**  
(thousand barrels per day)



Source: EIA Petroleum Supply Annual

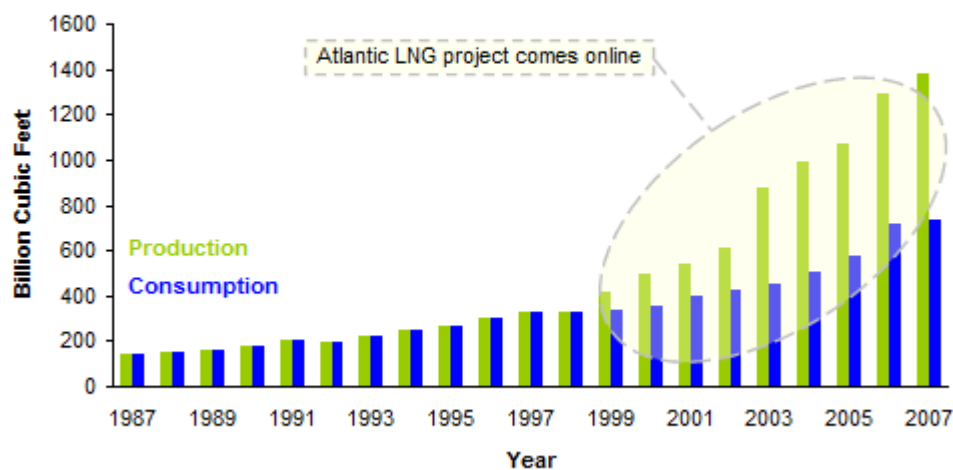
## Liquefied Natural Gas

### Trinidad and Tobago

**Trinidad and Tobago is the largest exporter of liquefied natural gas to the United States .**

Natural gas production in Trinidad and Tobago has climbed dramatically in recent years. In 2007, the country produced 1.4 trillion cubic feet (Tcf) of natural gas, up 7 percent year-on-year and over three times the level seen in 1997. Exports of liquefied natural gas (LNG) have facilitated this large increase in production. The country has benefited from a large amount of foreign investment into the sector, with BP Trinidad and Tobago (BPTT) leading these efforts. Other important players in the natural gas sector include British Gas (BG) and Chevron. In October 2009, BPTT brought the Savonette field onstream, at a rate of 600 million cubic feet per day (Mmcfd).

**Trinidad and Tobago's Natural Gas Production and Consumption**



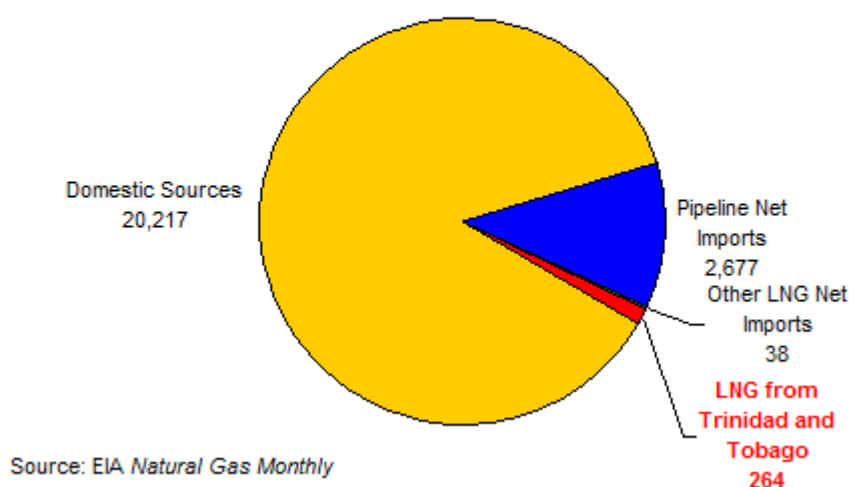
Source: EIA International Energy Annual

Trinidad and Tobago is the largest supplier of LNG to the United States and one of the largest LNG exporters in the world. In 2008, Trinidad and Tobago exported 264 Bcf of natural gas to the United States, about 75 percent of total U.S. LNG net imports, but only 1 percent of total U.S. natural gas supply. U.S. LNG imports from Trinidad and Tobago in 2008 were almost half the amount received in 2007, reflective of the general decline in total U.S. LNG imports in 2008. This

trend continued in the first half of 2009, with U.S. LNG imports from Trinidad and Tobago near 2008 levels. Sales of LNG cargos to European and Asian markets have helped to offset the decline in shipments to the U.S., along with the opening of several new regasification terminals in the Western Hemisphere in the last two years.

The Atlantic LNG Company, a consortium led by BP, BG, and Repsol-YPF, operates four LNG trains at Point Fortin, on the south-western coast of Trinidad. The first LNG train was completed in March 1999, with subsequent trains completed in 2002, 2003, and 2006. The four trains have capacity to produce a combined 14.8 million metric tons (Mmt) of LNG per year (775 Bcf of regasified natural gas). There has been discussions between Atlantic LNG and the government of Trinidad and Tobago over the construction of a fifth and sixth train, though there are no firm plans as of yet to pursue these projects. Trinidad and Tobago also has a substantial petrochemical industry to further monetize natural gas reserves.

**U.S. Natural Gas Supply, 2008 (Billion Cubic Feet)**



### Other Regional Developments

Some Caribbean islands have begun to look towards LNG as a way to diversify their energy consumption away from imported oil. In June 2007, Jamaica received nine bids for the construction of a \$250 million LNG regasification terminal in that country. The Petroleum Company of Jamaica (PCJ) had hoped to bring the facility online by the end of 2009, with an initial capacity of 1.2 Mmt of LNG per year. However, according to media reports, plans for the project have been shelved for the time being, and the country is now considering compressed natural gas (CNG) as an alternative.

Integrated LNG-power generation schemes have become a viable option for electricity generation in the Caribbean, especially as it can displace costly diesel or fuel oil. In the Dominican Republic, AES operates the Andres facility, an LNG regasification terminal that feeds two gas-fired power plants. In August 2000, Puerto Rico began importing LNG to supply the EcoEléctrica facility, a 540-MW natural gas-fired power plant.

The Bahamas has become a proposed gateway for LNG to enter the United States via Florida. AES has proposed the Ocean Express project, which would include an LNG receiving terminal in the Bahamas and an undersea pipeline to deliver natural gas to Florida. The project is reportedly still in the regulatory and planning process.

## Links

### EIA Links

[EIA Country Energy Profiles](#)

**U.S. Government**[U.S. Census Bureau](#)[U.S. State Department Information on Caribbean Countries](#)**Associations and Institutions**[CARICOM - The Caribbean Community](#)[Official Home Page of the Free Trade Area of the Americas](#)[The Organization of American States](#)[The Organization of Eastern Caribbean States](#)**Foreign Government Agencies**[Ministry of Energy and Energy Industries \(Trinidad and Tobago\)](#)**Sources**

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TendersInfo  
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**Contact Info**

cabs@eia.doe.gov

(202)586-8800  
[cabs@eia.doe.gov](mailto:cabs@eia.doe.gov)